CCTV Cameras

WV-BP330/WV-BP332/WV-BP334

Operating Instructions

(Lens : option)

ENGLISH

DEUTSCH

FRANÇAIS

ESPAÑOL

Panasonic

Before attempting to connect or operate this product,
please read these instructions completely.

ENGLISH VERSION

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK), NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is interned to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

We declare under our sole responsibility that the product to which this declaration relates is in conformity with the standards or other normative documents following the provisions of Directives EEC/73/23 and EEC/89/336.

Noi dichiariamo sotto nostra esclusiva responsabilità che il prodotto a cui si riferisce la presente dichiarazione risulta conforme ai seguenti standard o altri documenti normativi conformi alle disposizioni delle direttive CEE/73/23 e CEE/89/336.

Wij verklaren als enige aansprakelijke, dat het product waarop deze verklaring betrekking heeft, voldoet aan de volgende normen of andere normatiefve dokumenten, overeenkomstig de bepalingen van Richtlijnen 73/23/EEC en 89/336/EEC.

Vi erklærer os eneansvarlige for, at dette produkt, som denne deklaration omhandler, er i overensstemmelse med den følgende standarder eller andre normative dokumenter i følge bestemmelserne i direktivene 73/23/EEC og 89/336/EEC.

Vi deklarerar härmed värt fulla ansvar för att den produkt till vilken denna deklaration hänvisar är i överensstämmelse med standarddokument, eller andra normativa dokument som framstölls i Direktiv 73/23/EEC och 89/336/EEC.

Ilmoitamme yksinomaisella vastuullamme, että tuote, jota tämä ilmoitus koskee, noudattaa seuraavia standardeja tai muita ohjeellisia asiakirjoja, jotka noudattavat direktiivien 73/23/EEC ia 89/336/EEC. säädöksiä.

Vi erklærer oss alene ansvarlige for at produktet som denne erklæringen gjelder for, er i overensstemmelse med følgende normer eller andre normgivende dokumenter som fælger bestemmelsene i direktiven 73/23/EEC og 89/336/EEC.

WARNING:
TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For U.K.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amp and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⟨ASTA⟩ or the BSI mark ⟨BSI⟩ on the body of the fuse.
If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.
WARNING: This apparatus must be earthed.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code.

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

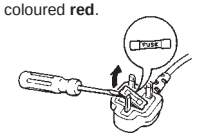
As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured **green-and-yellow** must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol ⏚ or coloured green or **green-and-yellow**.

The wire which is coloured **blue** must be connected to the terminal in the plug which is marked with the letter N or coloured **black**.

The wire which is coloured **brown** must be connected to the terminal in the plug which is marked with the letter L or coloured **red**.

How to replace the fuse
Open the fuse compartment with a screwdriver and replace the fuse and fuse cover.



The serial number of this product may be found on the top of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No._____

Serial No._____

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PREFACE

Panasonic's WV-BP330 series digital cameras introduce a new level of high picture quality and high resolution through the use of a 1/3-inch interline transfer CCD image sensor having 752 horizontal pixels (picture elements), and digital signal processing LSI's. This model offers cutting-edge technology for advanced video surveillance.

FEATURES

1. The following functions are built-in.
   (1) Auto Light Control (ALC)/Electronic Light Control (ELC)
   (2) Back Light Compensation (ON: Photometric weight is given to the centre of the screen/OFF: Effective if the object is not in the centre of the screen)
   (3) Various External Sync Functions, including Gen-Lock
2. Signal-to-noise ratio of 50 dB
3. Minimum illumination of 0.08 lx (0.008 foot-candle) with F1.4 lenses
4. Horizontal resolution of 570 lines
5. Shooting of indoor scenes with fixed iris lens by use of Electronic Light Control (ELC) function
6. Selectable auto iris control signal for the lens from a video signal or DC control signal

PRECAUTIONS

1. **Do not attempt to disassemble the camera.**
   To prevent electric shock, do not remove screws or covers.
   There are no user serviceable parts inside. Ask a qualified service person for servicing.

2. **Handle the camera with care.**
   Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

3. **Do not expose the camera to rain or moisture, or try to operate it in wet areas.**
   Turn the power off immediately and ask a qualified service person for servicing. Moisture can damage the camera and also create the danger of electric shock.

4. **Do not use strong or abrasive detergents when cleaning the camera body.**
   Use a dry cloth to clean the camera when dirty.
   In case the dirt is hard to remove, use a mild detergent and wipe gently.

5. **Clean the CCD faceplate with care.**
   Do not clean the CCD with strong or abrasive detergents. Use lens tissue or a cotton tipped applicator and ethanol.

6. **Never face the camera towards the sun.**
   Do not aim the camera at bright objects. Whether the camera is in use or not, never aim it at the sun or other extremely bright objects. Otherwise, blooming or smear may be caused.

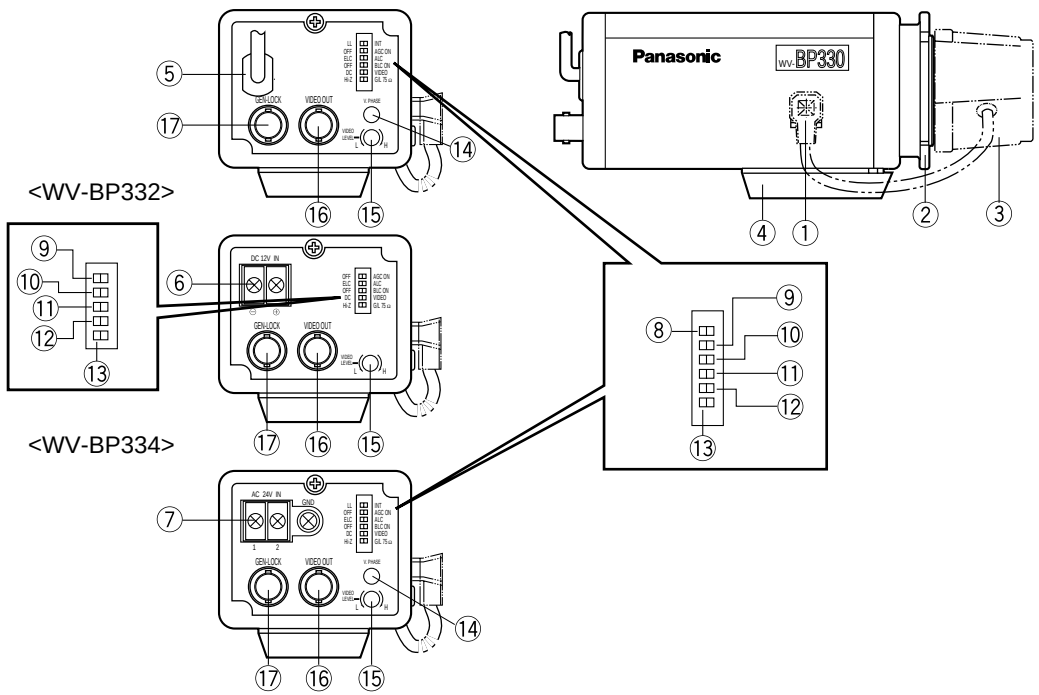
7. **Do not operate the camera beyond the specified temperature, humidity or power source ratings.**
   Use the camera under conditions where temperature is between –10°C - +50°C (14°F - 122°F), and humidity is below 90%. The input power source is 220-240V AC 50Hz for WV-BP330, 12V DC for WV-BP332, and 24V AC 50Hz for WV-BP334.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

<WV-BP330>

<WV-BP332>

<WV-BP334>



① **Auto Iris lens Connector**
This connector is for connecting auto iris lens by a 4-pin male connector supplied as a standard accessory (Part No. YFE4191J100).

② **Back-focal Adjusting Ring**
This ring is adjusts the back-focal length or picture focus. Rotate this ring clockwise for a C-mount lens or counterclockwise for a CS-mount lens.

③ **Lens (option)**

④ **Camera Mounting Screw Hole**
This hole is for mounting the camera onto a mounting bracket.

⑤ **Power Cord (only WV-BP330)**
Connect this power cord to an electrical outlet of 220-240V AC 50Hz.

⑥ **DC 12 V Input Terminal**
(DC 12V IN (only WV-BP332))
This terminal is for connecting the 12V DC power supply cord.

⑦ **AC 24V Input Terminal**
(AC 24V IN (only WV-BP334))
This terminal is for connecting the 24V AC 50Hz power supply cord.

⑧ **Synchronization Mode Selector**
(INT, LL (only WV-BP330 and WV-BP334))
Selects the camera synchronization mode from internal sync mode (INT) or line-lock mode (LL).
INT: When no signal is supplied to the GEN-LOCK connector, the camera synchronization mode is set to internal 2:1 interlace. Whenever the gen-lock video signal is supplied to the GEN-LOCK connector, the camera synchronization mode is automatically set to external synchronization.
LL: The camera synchronization mode is set to line-lock even if the gen-lock video signal is supplied to the GEN-LOCK connector.
Note: Set this selector to INT for gen-lock operation.

⑨ **AGC ON/OFF Selector (AGC ON, OFF)**
Selects the gain of the video amplifier as follows:
AGC ON: When the lens iris is fully open under low light condition, a clear picture is obtained by automatic increase of the gain.
OFF: A natural and low-noise picture is obtained under low light conditions.

⑩ **Automatic Light Control / Electronic Light Control Selector (ALC , ELC)**

Lets you select the mode according to the lens type that is used with this camera.

ALC: Select this mode when an auto iris lens (ALC lens) is used with this camera.

ELC: Select this mode when a fixed iris lens or manual iris lens is used with this camera.

⑪ **Back Light Compensation Mode Selector (BLC ON, OFF)**

Lets you select the mode according to the position of the object and light conditions on the screen.

BLC ON: More photometric weight is given to the centre of the screen than to the edge of the screen. Select this mode if the background light is strong such as a spotlight.

OFF: Lets you this mode if the main object is not located in the centre of the screen and a source of bright light is located near the centre of the screen.

⑫ **Lens Drive Signal Selector (VIDEO, DC)**

Lets you select the mode according to the type of auto iris lens drive signal to be supplied to the lens from the auto iris lens connector.

VIDEO: Select this mode if you are using the auto iris lens that requires a video drive signal.

DC: Select this mode if you are using the auto iris lens that requires a DC drive signal.

⑬ **Gen-lock Termination Selector (Hi-Z, G/L75Ω)**

Set this selector to Hi-Z when a gen-lock video input signal is looped through. In all other cases, set this selector to 75Ω.

⑭ **Vertical Phase Control (V. PHASE (only WV-BP330 and WV-BP334))**

Allows you to adjust the vertical phase of the camera signal to match the vertical phase of the line power.

⑮ **Video Level Control (VIDEO LEVEL, H(High)-L(Low))**

Allows you to adjust the video level when the Lens Drive Signal Selector is set to DC and the auto iris lens requiring the DC drive signal is mounted on the camera.

Note: The video level should be adjusted by the lens when the auto iris lens requiring the video drive signal is mounted on the camera.

⑯ **Video Output Connector (VIDEO OUT)**

This connector is for connecting with the VIDEO IN connector of the monitor.

⑰ **Gen-lock Input Connector (GEN-LOCK)**
This connector is for connecting an external system for synchronization.

Caution:
Connect to 12V DC (10.5V-16V) or 24V AC (19.5V-28V) class 2 power supply only. Make sure to connect the grounding lead to the GND terminal when the power is supplied from a 24V AC power source.

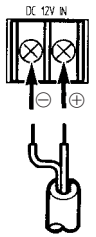
CONNECTIONS

A. WV-BP330 (220-240V AC 50Hz)

Connect the power cord to an electrical outlet of 220-240V AC 50Hz.

B. WV-BP332 (12V DC)

Connect the power cord to the DC 12V IN terminal on the rear panel of the WV-BP332.



12 V DC
(10.5 V - 16 V)

Resistance of copper wire [at 20°C (68°F)]

Copper wire size (AWG)	#24 (0.22mm²)	#22 (0.33mm²)	#20 (0.52mm²)	#18 (0.83mm²)
Resistance Ω/m	0.078	0.050	0.030	0.018
Resistance Ω/ft	0.026	0.017	0.010	0.006

- Calculation of maximum cable length between camera and power supply :

  $10.5V\ DC \leq V_A - (R \times 0.42 \times L) \leq 16V\ DC$

  L : Cable length (meters)

  R : Resistance of copper wire (Ω/meters)

  V_A : DC output voltage of power supply unit

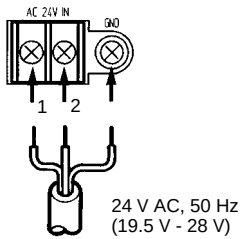
$$L\ standard = \frac{V_A - 12}{0.42 \times R}\ (meters)$$

$$L\ minimum = \frac{V_A - 16}{0.42 \times R}\ (meters)$$

$$L\ maximum = \frac{V_A - 10.5}{0.42 \times R}\ (meters)$$

C. WV-BP334 (24V AC 50Hz)

Connect the power cable to the AC 24V IN terminal on the rear panel of the WV-BP334.



Recommended wire gauge sizes for 24V AC line

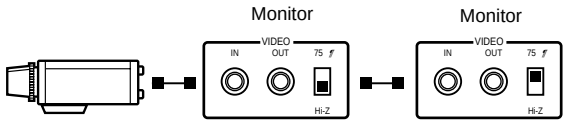
Copper wire size (AWG)		#24 (0.22mm²)	#22 (0.33mm²)	#20 (0.52mm²)	#18 (0.83mm²)
Length of Cable (Approx.)	(m)	95	150	255	425
	(ft)	314	495	842	1 403

Video Cable

1. It is recommended to use a monitor whose resolution is at least equal to that of the camera.
2. Set the termination switch to the 75Ω position on the last monitor.

   A. Use a 75Ω coaxial cable.

   B. Set the termination switch to the 75Ω position on the last monitor and to the Hi-Z position on the other monitors. Do not change the positions after setting.



C. The maximum extensible coaxial cable length between the camera and the monitor is shown below.

Type of coaxial cable		RG-59/U (3C-2V)	RG-6/U (5C-2V)	RG-11/U (7C-2V)	RG-15/U (10C-2V)
Recommended maximum cable length	(m)	250	500	600	800
	(ft)	825	1 650	1 980	2 640

3. Wiring precautions:
   - Do not bend the coaxial cable into a curve whose radius is smaller than 10 times the cable's diameter.
   - Never staple the cable, not even with circular staples. Impedance mismatching will occur.
   - Never crush or pinch the cable.

All of the above will change the impedance of the cable and cause poor picture quality.

Installation of Auto Iris Lens Connector

Install the lens connector (YFE4191J100) when using a video drive ALC lens.

The installation should be made by qualified service personnel or system installers.

(1) Cut the iris control cable at the edge of the lens connector to remove the existing lens connector and then remove the outer cable cover as shown in the diagram below.

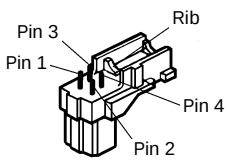
The pin assignment of the lens connector is as follows:

Pin 1: Power source; +9V DC, 50mA max.

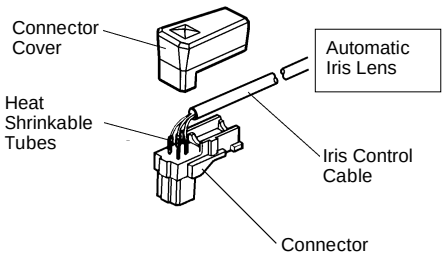
Pin 2: Not used

Pin 3: Video signal; 1.3 V[p-p]/40 kΩ

Pin 4: Shield, ground



(2) After connection, assemble the lens connector as follows.



Note: When the iris control cable is too thick to lock the connector cover with the connector base, cut off the rib on the connector.

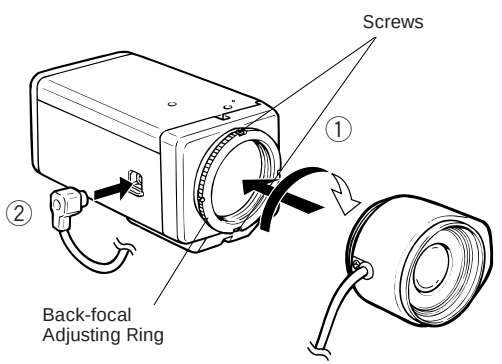
(Set the Lens Drive Signal Selector to the VIDEO position.)

Mounting the Lens

Caution:

Before you mount the lens, loosen the two screws on the ring, and rotate this ring clockwise until it stops. If the ring is not at the end, the inner glass or CCD image sensor may be damaged.

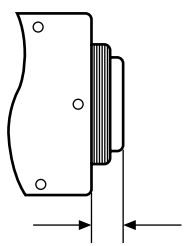
1. Mount the lens by turning it clockwise on the lens mount of the camera.
2. Connect the lens cable to the auto iris lens connector on the side of the camera.



Caution for Mounting the Lens

The lens mount should be a C-mount or CS-mount (1”-32UN) and the lens weight should be less than 450g (0.99 lbs). If the lens is heavier, both the lens and camera should be secured by using the supporter.

The protrusion at the rear of the lens should be as shown below:

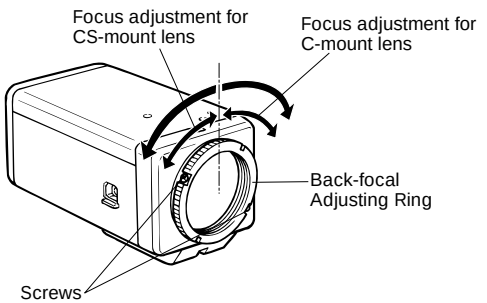


C-mount: Less than 11.5 mm (7/16”)
CS-mount: Less than 7.2 mm (1/4”)

FOCUS OR BACK-FOCAL ADJUSTMENT

The following adjustment should be made by qualified service personnel or system installers.

1. Loosen the screws on the back-focal adjusting ring.



2. Turn the back-focal adjusting ring to the desired position.

   Caution: When the C-mount lens is mounted, do not rotate the ring counterclockwise by force after it stops. If the ring is rotated by force, the inner lens or CCD image sensor may be damaged.

3. Tighten the screws on the back-focal adjusting ring.

   Note: If the camera is connected to the Quad System, glare may appear at the edge of the camera picture on the monitor.

   If this bothers you, adjust the lens focus to reduce the glare.

INSTALLATION OF CAMERA

- **Mounting from the bottom**

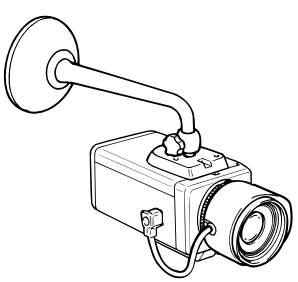
  This camera is designed to be mounted from the bottom, as shown below. The mounting hole is a standard photographic pan-head screw size (1/4" - 20).

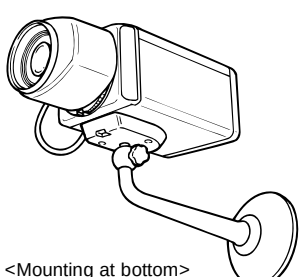
- **Mounting from the top**

  Remove the mount adapter from the bottom of the camera by removing the two fixing screws. Attach the mount adapter to the top as shown in the diagram, then mount the camera on the mounting bracket.

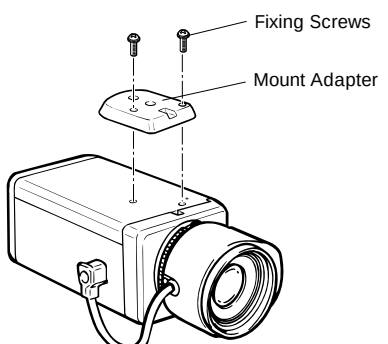
  Make sure that the two original fixing screws are used when mounting the mount adapter as longer length screws may damage inner components.

<Mounting at top>



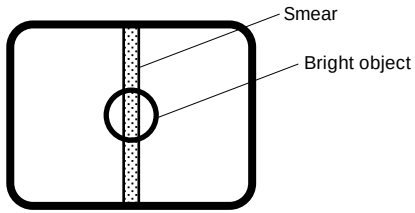


<Mounting at bottom>



PREVENTION OF BLOOMING AND SMEAR

When the camera is aimed at a bright light, such as a spot light, or a surface that reflects bright light, smear or blooming may appear. Therefore, the camera should be operated carefully in the vicinity of extremely bright objects to avoid smear or blooming.



SPECIFICATIONS

Pick-up Device:	752 (H) x 582 (V) pixels, Interline Transfer CCD	
Scanning Area:	4.9 (H) x 3.7 (V) mm (Equivalent to scanning area of 1/3” pick-up tube)	
Synchronization:	Internal, External, Line-locked or Multiplexed vertical drive (VD2) selectable	
Scanning System:	2 : 1 interlace	
Scanning:	625 lines / 50 fields / 25 frames	
Horizontal:	15.625 kHz	
Vertical:	50.00 Hz	
Horizontal Resolution:	570 lines	
Video Output:	1.0 V[p-p] CCIR composite 75 Ω / BNC connector	
Signal-to-Noise Ratio:	50 dB (AGC OFF)	
Electronic Light Control:	Equivalent to continuous variable shutter speed between 1/50 s and 1/10 000 s	
Minimum Illumination:	0.08 lx (0.008 footcandle) at F1.4, AGC ON	
Gain Control:	AGC ON (+18 dB) or OFF selectable	
Lens Mount:	C-mount or CS-mount selectable	
Ambient Operating Temperature:	–10°C - +50°C (14°F - 122°F)	
Ambient Operating Humidity:	Less than 90%	
Power Source and Power Consumption:	WV-BP330:	220-240V AC 50 Hz, 4.5W
	WV-BP332:	12V DC, 250 mA
	WV-BP334:	24V AC 50 Hz, 3.5W

Dimensions (without lens):	67 (W) x 55 (H) x 123 (D) mm	
	[2-5/8” (W) x 2-3/16” (H) x 4-13/16” (D)]	
Weights (without lens):	WV-BP330:	0.635kg (1.40lbs)
	WV-BP332:	0.445kg (0.98lbs)
	WV-BP334:	0.470kg (1.04lbs)

Weights and dimensions indicated are approximate.
Specifications are subject to change without notice.

STANDARD ACCESSORIES

Body Cap .....1 pc.
ALC Lens Connector (YFE4191J100) .....1 pc.

Matsushita Electric Industrial Co., Ltd.

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